

Allied Telesyn
International

CentreCOM

AT-MR840TF

8-Port Hub

Installation Guide

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Electrical Safety and Installation Requirements

STANDARDS: This product meets the following standards.

U.S. Federal Communications Commission

RADIATED ENERGY

Note: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Note: Modifications or changes not expressly approved by the manufacturer or the FCC can void your right to operate this equipment.

Canadian Department of Communications

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

RFI Emission

EN55022 Class A

WARNING: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Immunity

EN50082-1

Electrical Safety

EN60950, UL1950, CSA 950

Laser

EN60825



SAFETY

ELECTRICAL NOTICES

WARNING: ELECTRIC SHOCK HAZARD

To prevent ELECTRIC shock , do not remove cover. No user-serviceable parts inside. This unit contains HAZARDOUS VOLTAGES and should only be opened by a trained and qualified technician. To avoid the possibility of ELECTRIC SHOCK disconnect electric power to the product before connecting or disconnecting the LAN cables.



This is a "CLASS 1 LED PRODUCT"



INSTALLATION

LIGHTNING DANGER

DANGER: DO NOT WORK on equipment or CABLES during periods of LIGHTNING ACTIVITY.

CAUTION: POWER CORD IS USED AS A DISCONNECTION DEVICE. TO DE-ENERGISE EQUIPMENT disconnect the power cord.

ELECTRICAL—AUTO VOLTAGE ADJUSTMENT

This product will automatically adjust to any voltage between the ranges shown on the label.

ELECTRICAL—TYPE CLASS 1 EQUIPMENT

THIS EQUIPMENT MUST BE EARTHED. Power plug must be connected to a properly wired earth ground socket outlet. An improperly wired socket outlet could place hazardous voltages on accessible metal parts.

ELECTRICAL—CORD NOTICE

Use power cord, maximum 4.5 meters long, rated 6 amp minimum, 250V, made of HAR cordage molded IEC 320 connector on one end and on the other end a plug approved by the country of end use.

MOUNTING INSTRUCTIONS

CAUTION: These models are designed for operation in the HORIZONTAL position. VERTICAL MOUNTING must NOT BE DONE without the use of an Allied Telesyn vertical mount chassis designed for this purpose.

CAUTION: Air vents must not be blocked and must have free access to the room ambient air for cooling.

OPERATING TEMPERATURE

This product is designed for a maximum ambient temperature of 50 degrees C.

ALL COUNTRIES: Install product in accordance with local and National Electrical Codes.

NORMEN: Dieses Produkt erfüllt die Anforderungen der nachfolgenden Normen.

Hochfrequenzstörung	EN55022 Klasse A
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WARNUNG: Bei Verwendung zu Hause kann dieses Produkt Funkstörungen hervorrufen. In diesem Fall müßte der Anwender angemessene Gegenmaßnahmen ergreifen.

Störsicherheit	EN50082-1
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Elektrische Sicherheit	EN60950, UL1950, CSA 950
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Laser	EN60825
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SICHERHEIT

ACHTUNG: GEFAHRLICHE SPANNUNG

Das Gehäuse nicht öffnen. Das Gerät enthält keine vom Benutzer wartbaren Teile. Das Gerät steht unter Hochspannung und darf nur von qualifiziertem technischem Personal geöffnet werden. Vor Anschluß der LAN-Kabel, Gerät vom Netz trennen.



Das ist ein "LED Produkt der Klasse 1"



INSTALLATION

GEFAHR DURCH BLITZSCHLAG

GEFAHR: Keine Arbeiten am Gerät oder an den Kabeln während eines Gewitters ausführen.

VORSICHT: DAS NETZKABEL DIENT ZUM TRENNEN DER STROMVERSORGUNG.
ZUR TRENNUNG VOM NETZ, KABEL AUS DER STECKDOSE ZIEHEN.

AUTOMATISCHE SPANNUNGSEINSTELLUNG

Dieses Gerät stellt sich automatisch auf die auf dem Etikett aufgeführten Spannungswerte ein.

GERÄTE DER KLASSE 1

DIENE GERÄTE MÜSSEN GEERDET SEIN. Der Netzstecker darf nur mit einer vorschriftsmäßig geerdeten Steckdose verbunden werden. Ein unvorschriftsmäßiger Anschluß kann die Metallteile des Gehäuses unter gefährliche elektrische Spannungen setzen.

NETZKABEL

Das Netzkabel sollte eine maximale Länge von 4,5 Metern, einen Nennwert von mindestens 6 A und 250 V haben, aus HAR-Material hergestellt und mit einer geprüften, IEC 320 entsprechenden, Anschlußverbindung an einem Ende, und am anderen Ende mit einem im Land des Endverbrauchers geprüften Stecker ausgestattet sein.

MONTAGEANWEISUNGEN

VORSICHT: Diese Modelle sind für Betrieb in horizontaler Position entworfen worden. Das Gerät darf NICHT OHNE Gebrauch eines dafür entworfenen Allied Telesyn-Vertikalmontagegestells in VERTIKALER POSITION montiert werden.

VORSICHT

Die Entlüftungsöffnungen dürfen nicht versperrt sein und müssen zum Kühlen freien Zugang zur Raumluft haben.

BETRIEBSTEMPERATUR

Dieses Produkt wurde für den Betrieb in einer Umgebungstemperatur von nicht mehr als 50° C entworfen.

ALLE LÄNDER: Installation muß örtlichen und nationalen elektrischen Vorschriften entsprechen.

STANDARDER: Dette produkt tilfredsstiller de følgende standarder.

STRÅLINGSENERGI

Dette kommersielle produkt opfylder de krav, der i USA stilles til udstyr af Klasse A.

Radiofrekvens forstyrrelsesemission	EN55022 Klasse A
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ADVARSEL: I et hjemligt miljø kunne dette produkt forårsage radio forstyrrelse.

Bliver det tilfældet, påkræves brugeren muligvis at tage tilstrækkelige foranstaltninger.

Immunitet	EN50082-1
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Elektrisk sikkerhed.	EN60950, UL1950, CSA 950.
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Laser	EN60825
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SIKKERHED

ELEKTRISKE FORHOLDSREGLER

ADVARSEL: RISIKO FOR ELEKTRISK STØD

For at forebygge ELEKTRISK stød, undlad at åbne apparatet. Der er ingen indre dele, der kan repareres af brugeren. Denne enhed indeholder LIVSFARLIGE STRØMSPÆNDINGER og bør kun åbnes af en uddannet og kvalificeret tekniker. For at undgå risiko for ELEKTRISK STØD, afbrydes den elektriske strøm til produktet, før LAN-kablerne monteres eller afmonteres.

 Dette er et "PRODUKT UNDER KLASSE 1 LED"

INSTALLATION

FARE UNDER UVEJR

 FARE: UNDLAD at arbejde på udstyr eller KABLER i perioder med LYNAKTIVITET.

ADVARSEL: DEN STRØMFØRENDE LEDNING BRUGES TIL AT AFBRYDE STRØMMEN. SKAL STRØMMEN TIL APPARATET AFBRYDES, tages ledningen ud af stikket.

ELEKTRISK—AUTOMATISK SPÆNDINGSREGULERING

Dette apparat vil automatisk tilpasse sig enhver spænding indenfor de værdier, der er angivet på etiketten.

ELEKTRISK—KLASSE 1-UDSTYR

DETTE UDSTYR KRÆVER JORDFORBINDELSE. Stikket skal være forbundet med en korrekt installeret jordforbundet stikkontakt. En ukorrekt installeret stikkontakt kan sætte livsfarlig spænding til tilgængelige metaldele.

ELEKTRISK -- LEDNING

Anvend ledning af maksimum 4,5 meters længde, med en kapacitet på minimum 6 amp., 250 v, bestående af en IEC 320 connector med indstøbt HAR ledning i den ene ende og et stik i den anden ende, der er godkendt af myndighederne i brugerlandet.

INSTRUKTIONER FOR OPSTILLING

ADVARSEL: Disse modeller er konstrueret til at betjenes i HORIZONTAL position (vandret). VERTIKAL OPSTILLING (lodret) må IKKE FORETAGES uden brug af et Allied Telesyn vertikalt monteringsstel konstrueret til dette formål.

ADVARSEL: Ventilationsåbninger må ikke blokeres og skal have fri adgang til den omgivende luft i rummet for afkøling.

BETJENINGSTEMPERATUR

Dette apparat er konstrueret til en omgivende temperatur på maksimum 50 grader C.

ALLE LANDE: Installation af produktet skal ske i overensstemmelse med lokal og national lovgivning for elektriske installationer.

EISEN: Dit product voldoet aan de volgende eisen.

STRALINGSENERGIE

Dit handelsprodukt werd getest en voldoet aan de Amerikaanse vereisten voor een klasse A toestel.

RFI Emissie

EN55022 Klasse A

WAARSCHUWING: Binnenhuis kan dit product radiostoring veroorzaken, in welk geval de gebruiker verplicht kan worden om gepaste maatregelen te nemen.

Immunitet

EN50082-1

Electrische Veiligheid

EN60950, UL1950, CSA 950

Laser

EN60825

VEILIGHEID**WAARSCHUWINGEN MET BETrekking tot ELEktriciteit****WAARSCHUWING: GEVAAR VOOR ELEkTRISCHE SCHOKKEN**

Verwijder het deksel niet, teneinde ELEkTRISCHE schokken te voorkomen. Binnenin bevinden zich geen onderdelen die door de gebruiker onderhouden kunnen worden. Dit toestel staat onder GEVAARLIJKE SPANNING en mag alleen worden geopend door een daartoe opgeleide en bevoegde technicus. Om het gevaar op ELEkTRISCHE SCHOKKEN te vermijden, moet u het toestel van de stroombron ontkoppelen alvorens de LAN-kabels te koppelen of ontkoppelen.

Dit is een "KLASSE 1 LED-PRODUKT"





INSTALLATIE

GEVAAR VOOR BLIKSEMINSLAG

GEVAAR: NIET aan toestellen of KABELS WERKEN bij BLIKSEM.

WAARSCHUWING: HET TOESTEL WORDT UITGESCHAKELD DOOR DE STROOMKABEL TE ONTKOPPELEN. OM HET TOESTEL STROOMLOOS TE MAKEN: de stroomkabel ontkoppelen.

ELEKTRISCH: AUTOMATISCHE AANPASSING VAN DE SPANNING

Dit toestel past zich automatisch aan elke spanning aan, tussen de op het label vermelde waarden.

ELEKTRISCHE TOESTELLEN VAN KLASSE 1

DIT TOESTEL MOET GEAARD WORDEN. De stekker moet aangesloten zijn op een juist geaarde contactdoos. Een onjuist geaarde contactdoos kan de metalen onderdelen waarmee de gebruiker eventueel in aanraking komt onder gevaarlijke spanning stellen.

ELEKTRISCHE SNOEREN

Gebruik een elektrisch snoer, maximum 4,5 meter lang, berekend voor ten minste 6 ampâcère, 250 V, uit HAR vervaardigd, met aan het ene uiteinde een gevormd IEC 320 aansluitstuk en aan het andere uiteinde een stekker die goedgekeurd is door het land waar het toestel gebruikt zal worden.

MONTAGE-INSTRUCTIES

OPGELET: Deze modellen zijn ontworpen om te werken in HORIZONTALE stand.

VERTICALE MONTAGE mag NIET UITGEVOERD WORDEN, tenzij een daartoe speciaal ontworpen Allied Telesyn chassis voor verticale montage wordt gebruikt.

OPGELET: De ventilatiegaten mogen niet worden gesperd en moeten de omgevingslucht ongehinderd toelaten voor afkoeling.

BEDRIJFSTEMPERATUUR

De omgevingstemperatuur voor dit produkt mag niet meer bedragen dan 50 graden Celsius.

ALLE LANDEN: het toestel installeren overeenkomstig de lokale en nationale elektrische voorschriften.

NORMES: ce produit est conforme aux normes de suivantes :

ÉNERGIE IRRADIÉE

Ce matériel a été testé et certifié conforme par la réglementation américaine aux normes définies pour les appareils de Classe A.

Emission d'interférences radioélectriques

EN55022 Classe A

MISE EN GARDE : dans un environnement domestique, ce produit peut provoquer des interférences radioélectriques. Auquel cas, l'utilisateur devra prendre les mesures adéquates.

Immunité

EN50082 - 1

Sécurité électrique	EN60950, UL1950, CSA 950
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Laser	EN60825
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SÉCURITÉ

INFORMATION SUR LES RISQUES ÉLECTRIQUES

AVERTISSEMENT : DANGER D'ÉLECTROCUTION

Pour éviter toute ÉLECTROCUTION, ne pas ôter le revêtement protecteur du matériel. Ce matériel ne contient aucun élément réparable par l'utilisateur. Il comprend des TENSIONS DANGEREUSES et ne doit être ouvert que par un technicien dûment qualifié. Pour éviter tout risque d'ÉLECTROCUTION, débrancher le matériel avant de connecter ou de déconnecter les câbles LAN.

Ce matériel est un "PRODUIT À DIODE ÉLECTROLUMINESCENTE DE CLASSE 1"



INSTALLATION

DANGER DE FOUDRE

DANGER : NE PAS MANIER le matériel ou les CÂBLES lors d'activité orageuse.

ATTENTION : LE CORDON D'ALIMENTATION SERT DE MISE HORS CIRCUIT. POUR COUPER L'ALIMENTATION DU MATÉRIEL, débrancher le cordon.

RÉGLAGE DE TENSION AUTOMATIQUE ÉLECTRIQUE

Ce matériel peut s'ajuster automatiquement sur n'importe quelle tension comprise dans la plage indiquée sur l'étiquette.

ÉQUIPEMENT DE CLASSE 1 ÉLECTRIQUE

CE MATÉRIEL DOIT ÊTRE MIS A LA TERRE. La prise de courant doit être branchée dans une prise femelle correctement mise à la terre car des tensions dangereuses risqueraient d'atteindre les pièces métalliques accessibles à l'utilisateur.

INFORMATION SUR LE CORDON ÉLECTRIQUE

Utiliser un cordon secteur de 4.5 mètres de long maximum, calibré à 6 ampères minimum, 250V, fabriqué en câblage HAR avec connecteur IEC 32C moulé à une extrémité, et à l'autre extrémité, une prise de courant mâle répondant aux normes du pays d'utilisation.

INSTRUCTIONS DE MONTAGE

ATTENTION : Ces modèles sont destinés à fonctionner en position HORIZONTALE. Le matériel NE DOIT PAS être utilisé en MONTAGE VERTICAL, à moins d'utiliser un châssis de montage vertical Allied Telesyn conçu à cet effet.

ATTENTION : Ne pas bloquer les fentes d'aération, ceci empêcherait l'air ambiant de circuler librement pour le refroidissement.

TEMPÉRATURE DE FONCTIONNEMENT

Ce matériel est capable de tolérer une température ambiante maximum de 50 degrés Celsius.

POUR TOUS PAYS : Installer le matériel conformément aux normes électriques nationales et locales.

STANDARDIT: Tämä tuote on seuraavien standardien mukainen.

SÄTEILYENERGIA

Tämä kaupallinen tuote on testattu ja noudattaa Yhdysvaltojen vaatimuksia luokan A laitteelle.

Radioaaltojen häirintä

EN55022 Luokka A

VAROITUS: Kotioloalteissa tämä laite voi aiheuttaa radioaaltojen häiröitä, missä tapauksessa laitteen käyttäjän on mahdollisesti ryhdyttävä tarpeellisiin toimenpiteisiin.

Kestävyys

EN50082-1

Sähköturvallisuus

EN60950, UL1950, CSA 950

Laser

EN60825

TURVALLISUUS



SÄHKÖÖN LIITTYVIÄ HUOMAUTUKSIA

VAROITUS: SÄHKÖISKUVAARA

Estääksesi SÄHKÖISKUN älä poista kantta. Sisällä ei ole käyttäjän huollettavissa olevia osia. Tämä laite sisältää VAARALLISIA JÄNNITTEITÄ ja sen voi avata vain koulutettu ja pätevä teknikko. Välttääksesi SÄHKÖISKUN mahdollisuuden katkaise sähkövirta tuotteesseen ennen kuin liität tai irrotat paikallisverkon (LAN) kaapelit.



Tämä on "ENSIMMÄISEN LUOKAN VALODIODITUOTE"



ASENNUS

SALAMANISKUVAARA

HENGENVÄARA: ÄLÄ TYÖSKENTELE laitteiden tai KAAPELEIDEN KANSSA SALAMOINNIN AIKANA.

HUOMAUTUS: VIRTajohtoa käytetään virrankatkaisulaitteena. Virta katkaistaan irrottamalla virtajohto.

SÄHKÖ—AUTOMAATTINEN JÄNNITTEENSÄÄTÖ

Tämä tuote säätää automaattisesti mihiin tahansa jännitteeseen ohjetarrassa annettujen arvojen välillä.

SÄHKÖ—TYYPPILUOKAN 1 LAITTEET

TÄMÄ LAITE TÄYTYY MAADOITTAÄÄ. Pistoche täytyy liittää kunnollisesti maadoitettuun pistorasiaan. Virheellisesti johdotettu pistorasia voi altistaa metalliosat vaarallisille jännitteille.

SÄHKÖ —JOHTOON LIITTYVÄ HUOMAUTUS

Käytä seuraavanlaista virtajohtoa: maksimipituus 4,5 metriä, minimiteho 6 ampeeria, 250 V, valmistettu HAR-johdostosta, muovattu IEC 320 -liitin toisessa päässä ja käytömaassa hyväksytty pistoke toisessa päässä.

ASENNUSSOHOJEET

HUOMAUTUS: Nämä mallit on suunniteltu käytettäväksi VAAKA-asennossa.

PYSTYASENNUSTA EI SAA TEHDÄ ilman Allied Telesyn -pystykiinnitysalustaa, joka on suunniteltu tähän tarkoitukseen.

HUOMAUTUS: Ilmavaihtoreikiä ei pidä tukkia ja niillä täytyy olla vapaa yhteys ympäröivään huoneilmaan, jotta ilmanvaihto tapahtuisi.

KÄYTÖLÄMPÖTILA

Tämä tuote on suunniteltu ympäröivän ilman maksimilämpötilalle 50°C.

KAIKKI MAAT: Asenna tuote paikallisten ja kansallisten sähköturvallisuusmääärysten mukaisesti.

STANDARD: Questo prodotto è conforme ai seguenti standard.

ENERGIA IRRADIATA

Questo prodotto commerciale è stato collaudato e risponde ai requisiti U.S.A. per i dispositivi di classe A.

Emissione RFI (interferenza di radiofrequenza) EN55022 Classe A

AVVERTENZA: in ambiente domestico questo prodotto potrebbe causare radio interferenza. In questo caso potrebbe richiedersi all'utente di prendere gli adeguati provvedimenti.

Immunità	EN50082-1
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Sicurezza elettrica	EN60950, UL1950, CSA 950
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Laser	EN60825
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NORME DI SICUREZZA**AVVERTENZE ELETTRICHE****ATTENZIONE: PERICOLO DI SCOSSE ELETTRICHE**

Per evitare SCOSSE ELETTRICHE non asportare il coperchio. Le componenti interne non sono riparabili dall'utente. Questa unità ha TENSIONI PERICOLOSE e va aperta solamente da un tecnico specializzato e qualificato. Per evitare ogni possibilità di SCOSSE ELETTRICHE, interrompere l'alimentazione del dispositivo prima di collegare o staccare i cavi LAN.

Questo è un "PRODOTTO CON LED DI CLASSE 1"

**INSTALLAZIONE****PERICOLO DI FULMINI**

PERICOLO: NON LAVORARE sul dispositivo o sui CAVI durante PRECIPITAZIONI TEMPORALI SCHE.

ATTENZIONE: IL CAVO DI ALIMENTAZIONE È USATO COME DISPOSITIVO DI DISATTIVAZIONE. PER TOGLIERE LA CORRENTE AL DISPOSITIVO staccare il cavo di alimentazione.

ELETTRICITÀ—REGOLAZIONE AUTOMATICA DELLA TENSIONE

Questo prodotto regolerà automaticamente la tensione ad un valore compreso nella gamma indicata sull'etichetta.

ELETTRICITÀ—DISPOSITIVI DI CLASSE 1

QUESTO DISPOSITIVO DEVE AVERE LA MESSA A TERRA. La spina deve essere inserita in una presa di corrente specificamente dotata di messa a terra. Una presa non cablata in maniera corretta rischia di scaricare una tensione pericolosa su parti metalliche accessibili.

ELETTRICITÀ—AVVERTENZA SUL CAVO

Usare un cavo della lunghezza massima di metri 4,5, con capacità minima di 6 A, 250 V, di filo HAR, dotato di connettore stampato IEC 320 ad un'estremità e di spina approvata dal paese di destinazione all'altra.

ISTRUZIONI PER IL MONTAGGIO

ATTENZIONE: questi modelli sono concepiti per il funzionamento in posizione ORIZZONTALE. NON È POSSIBILE EFFETTUARE IL MONTAGGIO VERTICALE senza utilizzare l'apposito telaio per il montaggio verticale Allied Telesyn.

ATTENZIONE: le prese d'aria non vanno ostruite e devono consentire il libero ricircolo dell'aria ambiente per il raffreddamento.

TEMPERATURA DI FUNZIONAMENTO

Questo prodotto è concepito per una temperatura ambientale massima di 50 gradi centigradi.

TUTTI I PAESI: installare il prodotto in conformità delle vigenti normative elettriche nazionali.

SIKKERHETSNORMER: Dette produktet tilfredsstiller følgende sikkerhetsnormer.

UTSTRÅLT ENERGI

Dette kommersielle produktet er blitt testet og funnet å være i samsvar med amerikanske krav for et klasse A-apparat.

RFI stråling

EN55022 Klasse A

ADVARSEL: Hvis dette produktet benyttes til privat bruk, kan produktet forårsake radioforstyrrelse. Hvis dette skjer, må brukeren ta de nødvendige forholdsregler.

Immunitet

EN50082-1

Elektrisk sikkerhet

EN60950, UL1950, CSA 950

Laser

EN60825

SIKKERHET

ELEKTRISITET

ADVARSEL: FARE FOR ELEKTRISK SJOKK

For å unngå ELEKTRISK sjokk, må dekslet ikke tas av. Det finnes ingen deler som



brukeren kan reparere på innsiden. Denne enheten inneholder FARLIGE SPENNINGER, og må kun åpnes av en faglig kvalifisert tekniker. For å unngå ELEKTRISK SJOKK må den elektriske strømmen til produktet være avslått før LAN-kablene til- eller frakobles.

Dette er et "KLASSE 1 LED PRODUKT"



INSTALLASJON

FARE FOR LYNNEDSLAG

FARE: ARBEID IKKE på utstyr eller KABLER i TORDENVÆR.



FORSIKTIG: STRØMLEDNINGEN BRUKES TIL Å FRAKOBLE UTSTYRET. FOR Å DEAKTIVISERE UTSTYRET, må strømforsyningen kobles fra.

ELEKTRISK—AUTO SPENNINGSTILPASNING

Dette produktet vil automatisk bli tilpasset hvilken som helst strømspenning i de områdene som vises på etiketten.

ELEKTRISK—TYPE 1- KLASSE UTSTYR

DETTE UTSTYRET MÅ JORDES. Strømkontakten må være tilkoplet en korrekt jordet kontakt. En kontakt som ikke er korrekt jordet kan føre til farlig spenninger i lett tilgjengelige metalldeler.

ELEKTRISK — MEDDELELSE OM LEDNINGER

Bruk en strømledning av maksimalt 4.5 m. i lengde, godkjent for minst av 6 amp, 250V, fremstilt av HAR ledning IEC 320 koplingsstykke i den ene enden, og i den andre enden en plugg som er blitt godkjent i brukerlandet.

BRUKSANVISNING FOR MONTERING

FORSIKTIG: Disse modellene er beregnet til bruk i HORIZONTAL stilling. I VERTIKAL MONTERING må IKKE UTFØRES uten bruk av et Allied Telesyn vertikal monteringschassis som er spesiallaget til dette formål.

FORSIKTIG: Lufteventilene må ikke blokkeres, og må ha fri tilgang til luft med romtemperatur for avkjøling.

DRIFTSTEMPERATUR

Dette produktet er konstruert for bruk i maksimum romtemperatur på 50 grader celsius.

ALLE LAND: Produktet må installeres i samsvar med de lokale og nasjonale elektriske koder.

PADRÕES: Este produto atende aos seguintes padrões.

ENERGIA IRRADIADA

Este produto foi testado e atende aos requisitos para dispositivos comerciais de Classe A dos E.U.A.

Emissão de interferência de radiofrequência EN55022 Classe A

AVISO: Num ambiente doméstico este produto pode causar interferência na radiorrecepção e, neste caso, pode ser necessário que o utente tome as medidas adequadas.

Imunidade EN50082-1

Segurança Eléctrica EN60950, UL1950, CSA 950

Laser EN60825

SEGURANÇA

AVISOS SOBRE CARACTERÍSTICAS ELÉTRICAS

ATENÇÃO: PERIGO DE CHOQUE ELÉTRICO

Para evitar CHOQUE ELÉTRICO, não retire a tampa. Não contém peças que possam ser consertadas pelo usuário. Este aparelho contém VOLTAGENS PERIGOSAS e só deve ser aberto por um técnico qualificado e treinado. Para evitar a possibilidade de CHOQUE ELÉTRICO, desconecte o aparelho da fonte de energia elétrica antes de conectar e desconectar os cabos da LAN.

Este é um "PRODUTO CLASSE 1 LED"

INSTALAÇÃO

PERIGO DE CHOQUE CAUSADO POR RAIO

PERIGO: NÃO TRABALHE no equipamento ou nos CABOS durante períodos suscetíveis a QUEDAS DE RAIO.

CUIDADO: O CABO DE ALIMENTAÇÃO É UTILIZADO COMO UM DISPOSITIVO DE DESCONEXÃO. PARA DESELETRIFICAR O EQUIPAMENTO, desconecte o cabo de ALIMENTAÇÃO.

ELÉTRICO—AJUSTE AUTOMÁTICO DE VOLTAGEM

Este produto ajusta-se automaticamente a qualquer voltagem que esteja dentro dos limites indicados no rótulo.

ELÉTRICO—EQUIPAMENTOS DO TIPO CLASSE 1

DEVE SER FEITA LIGAÇÃO DE FIO TERRA PARA ESTE EQUIPAMENTO. O plugue de alimentação deve ser conectado a uma tomada com adequada ligação de fio terra. Tomadas sem adequada ligação de fio terra podem transmitir voltagens perigosas a peças metálicas expostas.

ELÉTRICO—AVISO SOBRE O CABO DE ALIMENTAÇÃO

Use cabo de alimentação com comprimento máximo de 4,5 metros, com uma capacidade indicada mínima de 6 amp e 250 V, fabricado de material para cabo HAR com conector moldado IEC 320 em uma extremidade e, na outra extremidade, um plugue aprovado para uso no país em questão.

INSTRUÇÕES DE INSTALAÇÃO

CUIDADO: Estes modelos foram projetados para funcionar na posição HORIZONTAL. NÃO DEVE SER EFETUADA INSTALAÇÃO VERTICAL sem o uso de um chassis de montagem vertical Allied Telesyn projetado para este fim específico.

CUIDADO: As aberturas de ventilação não devem ser bloqueadas e devem ter acesso livre ao ar ambiente para arrefecimento adequado do aparelho.

TEMPERATURA DE FUNCIONAMENTO

Este produto foi projetado para uma temperatura ambiente máxima de 50 graus centígrados.

TODOS OS PAÍSES: Instale o produto de acordo com as normas nacionais e locais para instalações elétricas.

ESTÁNDARES: Este producto cumple con los siguientes estándares.

ENERGIA RADIADA

Este producto comercial ha sido probado y cumple con las normas requeridas en los EE. UU. para un dispositivo de Clase A.

Emisión RFI

EN55022 Clase A

ADVERTENCIA: en un entorno doméstico, este producto puede causar radiointerferencias, en cuyo caso, puede requerirse del usuario que tome las medidas que sean convenientes al respecto.

Inmunidad

EN50082-1

Seguridad eléctrica

EN60950, UL1950, CSA 950

Laser

EN60825

SEGURIDAD**AVISOS ELECTRICOS****ADVERTENCIA: PELIGRO DE ELECTROCHOQUE**

Para evitar un ELECTROCHOQUE, no quite la tapa. No hay ningún componente en el interior al cual puede prestar servicio el usuario. Esta unidad contiene VOLTAJES PELIGROSOS y sólo deberá abrirla un técnico entrenado y calificado. Para evitar la posibilidad de ELECTROCHOQUE desconecte la corriente eléctrica que llega al producto antes de conectar o desconectar los cables LAN.

Este es un "PRODUCTO DE DIODO LUMINISCENTE (LED) CLASE 1"

**INSTALACION****PELIGRO DE RAYOS**

PELIGRO: NO REALICE NINGUN TIPO DE TRABAJO O CONEXION en los equipos o en LOS CABLES durante TORMENTAS ELECTRICAS.

ATENCION: EL CABLE DE ALIMENTACION SE USA COMO UN DISPOSITIVO DE DESCONEXION. PARA DESACTIVAR EL EQUIPO, desconecte el cable de alimentación.

ELECTRICO—AUTO-AJUSTE DE TENSION

Este producto se ajustará automáticamente a cualquier tensión entre los valores máximos y mínimos indicados en la etiqueta.

ELECTRICO—EQUIPO DEL TIPO CLASE 1

ESTE EQUIPO TIENE QUE TENER CONEXION A TIERRA. El cable tiene que conectarse a un enchufe a tierra debidamente instalado. Un enchufe que no está correctamente instalado podría ocasionar tensiones peligrosas en las partes metálicas que están expuestas.

ELECTRICO—ADVERTENCIA SOBRE EL CABLE

Use un cable eléctrico con un máximo de 4,5 metros de largo, con una capacidad mínima de 6 amperios, 250 V, hecho de cable HAR, con el conector moldeado IEC 320 en un extremo y con un enchufe que está aprobado por el país de uso final en el otro.

INSTRUCCIONES DE MONTAJE

ATENCION: Estos modelos están diseñados para operar en posición HORIZONTAL. NO SE DEBEN MONTAR VERTICALMENTE sin el uso de un chasis de montaje vertical de Allied Telesyn que se ha diseñado para este fin.

ATENCION: Las aberturas para ventilación no deberán bloquearse y deberán tener acceso libre al aire ambiental de la sala para su enfriamiento.

TEMPERATURA REQUERIDA PARA LA OPERACIÓN

Este producto está diseñado para una temperatura ambiental máxima de 50 grados C.

PARA TODOS LOS PAÍSES: Monte el producto de acuerdo con los Códigos Eléctricos locales y nacionales.

STANDARDER: Denna produkt uppfyller följande standarder.

ENERGIUTSTRÄLNING

Denna handelsprodukt har testats och befunnits vara i enlighet med USA:s krav för Klass A utrustning.

Radiostörning

EN55022 Klass A

VARNING: Denna produkt kan ge upphov till radiostörningar i hemmet, vilket kan tvinga användaren till att vidtaga erforderliga åtgärder.

Immunitet

EN50082-1

Elsäkerhet

EN60950, UL1950, CSA 950

Laser

EN60825

SÄKERHET

TILLKÄNNAGIVANDEN BETräFFANDE ELEKTRICITETSRIKS:

RISK FÖR ELEKTRISK STÖT För att undvika ELEKTRISK stöt, ta ej av locket. Det finns inga delar inuti som behöver underhållas. Denna apparat är under HÖGPÄNNING och får endast öppnas av en utbildad kvalificerad tekniker. För att undvika ELEKTRISK STÖT, koppla ifrån produktens strömanslutning innan LAN-kablarna ansluts eller kopplas ur.



Detta är en "KLASS 1 LYSDIODPRODUKT"



INSTALLATION

FARA FÖR BLIXTNEDSLAG

FARA: ARBETA EJ på utrustningen eller kablarna vid ÅSKVÄDER.

WARNING: NÄTKABELN ANVÄNDTS SOM STRÖMBRYTARE FÖR ATT KOPPLA FRÅN STRÖMMEN, dra ur nätkabeln.

ELEKTRISKT—AUTOMATISK SPÄNNINGSJUSTERING

Denna produkt justeras automatiskt till alla spänningar inom omfånget som indikeras på produkterns märkning.

ELEKTRISKT—TYP KLASS 1 UTRUSTNING

DENNA UTRUSTNING MÅSTE VARA JORDAD. Nätkabeln måste vara ansluten till ett ordentligt jordat uttag. Ett felaktigt uttag kan göra att närliggande metalldelar utsätts för högspänning. Apparaten skall anslutas till jordat uttag, när den ansluts till ett nätverk.

ELEKTRISKT—ANMÄRKNING BETräFFANDE KABELN

Använd en kabel med maximum längd 4,5 meter och minimum 6 amp nominal, 250V, av HAR kabelfabrikat med ett specialutformat IEC 320-kontaktdon i ena änden och i den andra en plugg som godkänts i landet där produkten används.

MONTERINGSINSTRUKTIONER

WARNING: Dessa modeller är konstruerade för användning i HORISONTALLÄGE.

VERTIKALMONTERING får EJ UTFÖRAS utan att ett Allied Telesyn specialkonstruerat vertikalt monteringschassi används.

WARNING: Luftventilerna får ej blockeras och måste ha fri tillgång till omgivande rumsluft för avsvalning.

DRIFTSTEMPERATUR

Denna produkt är konstruerad för rumstemperatur ej överstigande 50 grader Celsius.

ALLA LÄNDER: Installera produkten i enlighet med lokala och statliga bestämmelser för elektrisk utrustning.

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Chapter 1

Product Description

Overview

The AT-MR840TF is a 10Base-T /10Base-FL standalone, unmanaged hub that has eight UTP (RJ45) ports and one fiber optics port. There are two types of fiber optic ports that accommodate an uplink connection to the backbone. The ST version accommodates a fiber ST cable whereas the SC version accommodates an SC cable. The SC/ST uplink port provides a means for media conversion and increased distance.

In addition to uplink capabilities, the hubs can be cascaded using one of the eight RJ45 ports or the fiber ST/SC port to connect to other hubs to increase the segment size. Up to four hubs can be interconnected per IEEE 802.3 standards.

The AT-MR840TF hubs support full-length cable segments with the maximum number of supported devices allowed within IEEE 802.3 standards. The hub is equipped with an internal universal AC power supply and can be desk or wall-mounted. For wall-mounting instructions and materials, refer to AT-BRKT17.

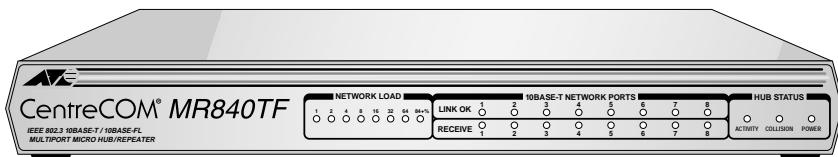


Figure 1: AT-MR840TF (ST/SC) Front Panel

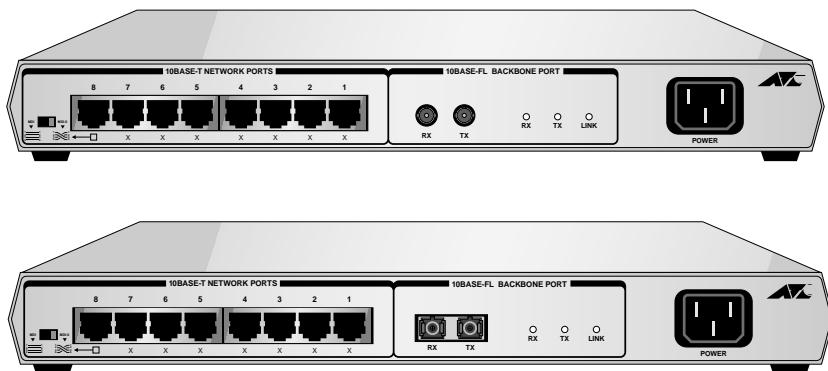


Figure 2: AT-MR840TF (ST/SC) Back Panels

Major Features

The major features of the AT-MR840TF include the following:

- ❑ 10Base-T/10Base-FL support
- ❑ Cascading capability via MDI/MDI-X switch
- ❑ 10Base-FL Uplink via ST/SC connectors for media conversion and distance
- ❑ Hub and port status LEDs
- ❑ Network utilization LEDs
- ❑ Auto partitioning
- ❑ Packet regeneration and retiming
- ❑ Collision detection/correction and reconnection
- ❑ Jabber lock-up protection
- ❑ IEEE 802.3 compliant and 10Base-T and Ethernet Version 1.0 and 2.0 compatible
- ❑ Link integrity test

Functional Description

The AT-MR840TF hub incorporates the latest technologies, including a custom Application Specific Integrated Circuit (ASIC) and Surface Mount Technology (SMT). Employing state-of-the-art technologies results in enhanced functionality, increased reliability, and improved performance and as detailed in the following list of features:

Packet Regeneration

Packet regeneration is a high-performance network feature that includes the regenerating of the packet preamble, retiming of data packets, and the extension of collision fragments. When transmitting a packet, the hub ensures that the outgoing packet complies with IEEE 802.3 specification in terms of preamble structure, signal amplitude, and timing characteristics. Data packets repeated will contain a minimum of 56 preamble bits before start-of-frame delimiter. In addition, the hub restores signal symmetry to the repeated data packets, removing jitter and distortion caused by the network cabling.

Link Integrity

The IEEE 802.3 defined link integrity test function continually monitors the twisted pair cable to ensure link continuity of the receive pair between the user node and the hub.

Autopartitioning

Also known as segmentation, each segment will be automatically partitioned whenever 32 consecutive collisions occur on the segment. One valid packet will reset the segment and return it to the auto reconnecting segment. Any of the twisted pair ports can be partitioned if the frequency of collisions becomes excessive. The enabled network port is partitioned if one of the following conditions occurs on that port:

- A collision condition exists continuously for more than 2048 bit times
- A collision condition occurs during each of the 32 consecutive attempts to transmit to that port.

When there is no more collisions in the partitioned port and activity of 512 bit times or more is detected, the partition is released and the port is reconnected.

Jabber Lock-up Protection

Jabber lock-up protects the hub from being overrun with excessively long data packets by isolating segments that contain these oversized packets (exceed maximum packet length). Therefore, jabber lock-up automatically prevents data which exceeds the allowed duration (usually 5 ms) from reaching the hub, or if the hub has been continuously transmitting for more than 65,536 bit times. This protection scheme automatically interrupts transmission for 96 bit times.

Fragment Extension

If the total packet length received is less than 96 bits, including preamble, the packet length is expanded to 96 bits by appending a jam sequence to the original fragment.

Jam Signal

If one port detects a carrier, the hub repeats all received data form this port to another port. If a collision is detected while sending data to a port, the hub sends the jam signal to all connected ports. If the collision status continues on only one port even after 96 bits of jam signal have been sent, the jam signal is sent to ports in the non-collision status.

Functional Block Diagram

Figure 3 shows the relationship between the major components of the AT-MR840TF hub; Table 1 lists and identifies these components.

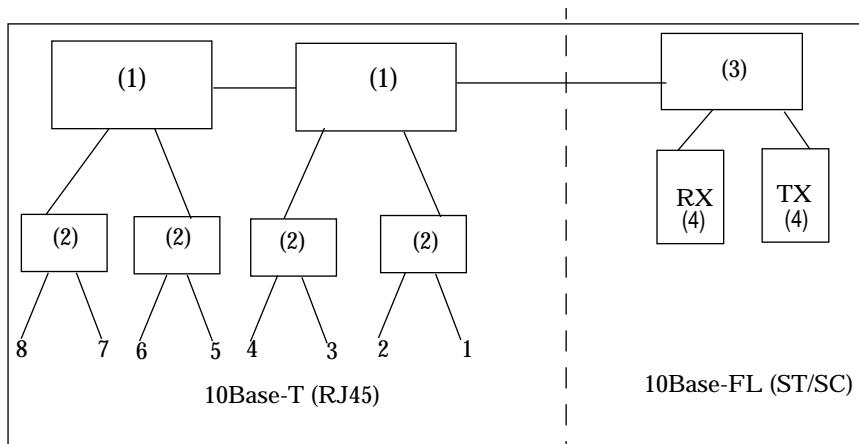


Figure 3: AT-MR840TF Functional Block Diagram

Table 1: AT-MR840TF Major Components

Component #	Component Name
1	Ethernet Controller
2	Transceiver/Phy Interface
3	Ethernet MAU
4	Fiber Optic Transceiver

Physical Description

The hub's major components include the following:

- LEDs (port, hub, network)
- Eight Unshielded/Shielded Twisted Pair (UTP/STP) RJ45 ports
- One fiber uplink port (ST or SC)
- MDI/MDI-X switch
- AC power connector

LEDs

There are two network port LEDs for each port of the eight 10Base-T (RJ45) ports: LINK OK and RECEIVE. These LEDs indicate whether the port is linked, receiving data, or both. In general, port status LEDs show the functionality of the port.

If the LINK OK LED lights green and the RECEIVE LED is flashing amber, a signal is being received and the segment attached to the port is functional.

Table 2 lists and defines the ports, hub, and network status LEDs.**Table 2:** Port and Hub Status LEDs

LED	Color	Description
LINK OK (port)	green	ON indicates that a valid link exists. No light indicates that the link is not OK. If the polarity is incorrect, the LINK OK light will be OFF until polarity is corrected by the multiport hub's UTP port.
RECEIVE (port)	amber	FLASHING indicates that there is activity (packet transmission) on the port, that the Link is OK, that the port is not partitioned. Brief flashes indicate low traffic levels.
LINK (uplink port)	green	ON indicates that a valid link exists.
TX (uplink port)	green	ON indicates that the port is transmitting packets.
RX (uplink port)	green	ON indicates that the port is receiving packets.
ACTIVITY (hub)	amber	FLASHING indicates that the hub is transmitting packets.
COLLISION (hub)	amber	FLASHING indicates that packet collisions are occurring on the hub.
POWER (hub)	green	ON indicates that the hub is receiving power.
NETWORK LOAD	amber	FLASHING indicates the percentage of network utilization from 1%, 2%, 4%, 8%, 16%, 32%, 64% to 80+%.

For detailed information concerning the Collision LED, see “Verifying Collision LED” on page 14.

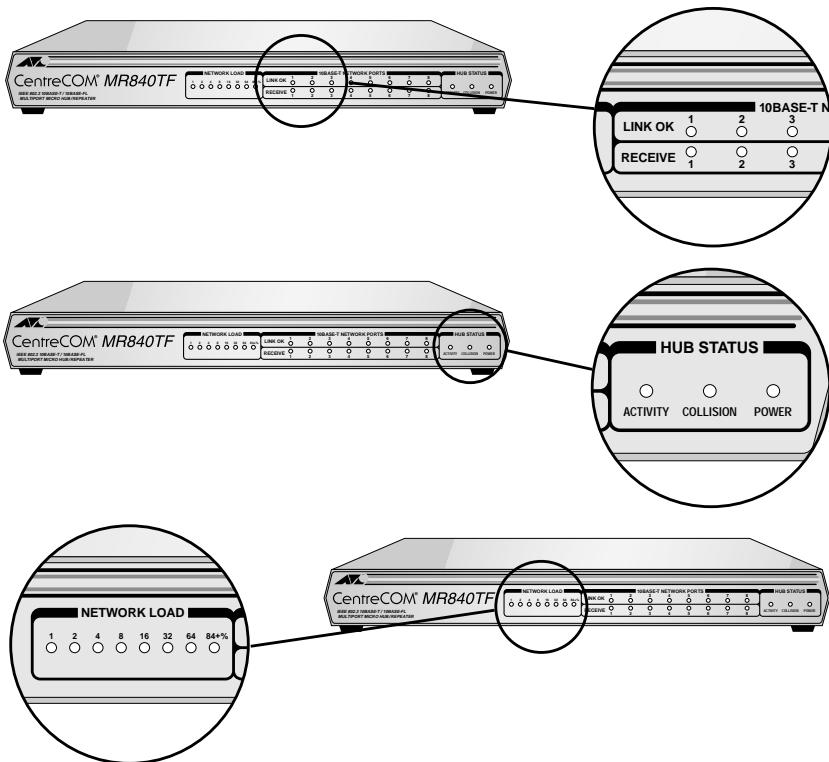


Figure 4: Port, Hub, and Network LEDs

UTP, Cascade, and Uplink Ports

While the eight UTP ports can be used to directly connect to workstations in a standalone configuration, Port 8 is equipped with an MDI/MDI-X switch that conveniently provides the connection (cascade) to other hubs.

In addition, the 10Base-FL(ST/SC) port provides the uplink connection to a fiber backbone network. See Figure 5. Also, see Chapter 3 “Configurations” for standalone, cascade and uplink configurations.

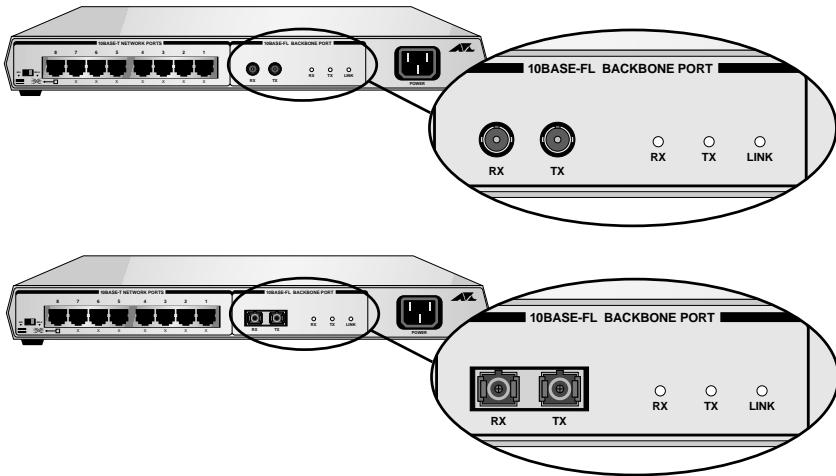


Figure 5: ST/SC Fiber Connectors

MDI/MDI-X Switch

The Media Dependent Interface/Media Dependent Interface Crossover (MDI/MDI-X) switch is a slide switch that allows you to connect to either another hub or to a workstation by converting Port 8 to an uplinkable port; thereby allowing one hub to connect to another hub without requiring special crossover cables. Figure 6 illustrates this switch; Table 3 defines the switch's function.

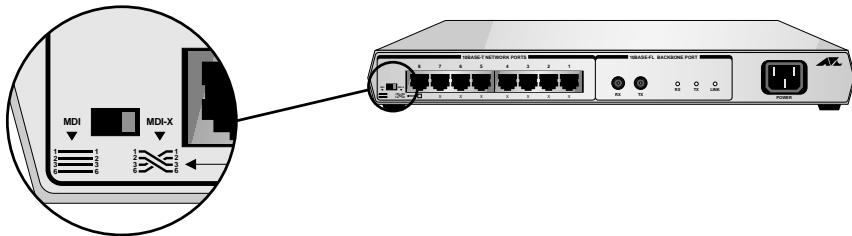


Figure 6: MDI/MDI-X Slide Switch

Table 3: MDI/MDI-X Switch

MDI /MDI-X Position	Function
MDI	When in the MDI position (left), the port can be connected to another hub using straight through twisted pair cabling. The MDI position is a hub pinout which automatically swaps the TX and RX pinouts so that they do not conflict with the TX and RX ports at the other end of a straight-through cable.
MDI-X	When in the MDI-X position (right), the port can be connected to a workstation, node, or any other DTE (default).

Power Requirements for Model Types

Table 4 lists the power requirements for the AT-MR840TF models.

Table 4: Power Requirements for AT-MR840TF Models

Part No.	Power	Power Cord	Fiber Connector Type	RJ45
AT-MR840TF-13	100V-120V	North America	ST	Unshielded
At-MR840TF-12	100V-120V	North America	SC	Unshielded
AT-MR840TF-23A	200V -240V	Not available	ST	Shielded
AT-MR840TF-22A	200V-240V	Not available	SC	Shielded

Chapter 2

Installation

Before You Begin

Before proceeding with the installation, please read “Electrical Safety and Installation Requirements” on page iii through xviii.

Note

Installation of this product should only be performed by TRAINED SERVICE PERSONNEL.

Power Requirements

Be sure that the voltage and frequency is either 100-120 or 200-240 VAC and 50 or 60 Hz. Since there is no external power switch, power is applied when the power cord is connected.

Installing the Hub

Making UTP Port Connections

1. Carefully remove the AT-MR840TF hub from its packaging box. Keep the packing materials for future use.
2. Position the hub in a location with adequate ventilation and a power source.
3. Attach an AC cord to the hub and make sure that the POWER LED on the front panel lights.
4. On the hub side, attach your 10Base-T UTP cables (RJ45 connectors) to the 10Base-T ports.
5. On the workstation side, attach the other end of the UTP cable to the 10Base-T network adapter card on the workstation.

Note

If you are not using the UPLINK port (Port 8) for cascading to another hub, you may connect a standard 10Base-T cable to Port 8. Set the MDI/MDI-X switch to the MDI-X position.

6. Make sure that the LINK OK LEDs light green. If the LINK OK LEDs do not light, check that the adapter card on the opposite end of the UTP segment is operational.

Making 10Base-FL Uplink Port Connections

To make a fiber uplink connection to the network/backbone:

1. Connect the 10Base-FL cables (either SC or ST) to their respective fiber connectors.
2. Make sure that the LINK LED for the fiber uplink port lights green.

Making Cascading Connections

To cascade (connect from one hub to another):

1. From the first hub, connect Port 8 to any of the available UTP ports on the second hub. Continue this scheme for any additional hubs, always first going from Port 8 to an unused UTP port.
2. Make sure the MDI/MDI-X switch for Port 8 is set to the MDI position if you select Ports 1-7 of the second hub.
3. If you cascade two hubs using Port 8, make sure you set the MDI/MDI-X switch to the MDI-X position on only one of the hubs.

Note

Any two ports can be used to cascade hubs as long as one side is set to the MDI position while the other side is set to the MDI-X position using straight-through cable. However, Allied Telesyn recommends that you use the dedicated MDI/MDI-X port (Port 8) to connect to available UTP ports (1-7) when cascading hubs.

Table 5 lists the MDI/MDI-X switch positions when using straight-through and crossover cable.

Table 5: MDI/MDI-X Switch Position Rules

Position	Required Cable
MDI to MDI-X	straight through
MDI-X to MDI	straight through
MDI to MDI	crossover
MDI-X to MDI-X	crossover

Verifying Installation

1. Make sure that the LINK OK LED of the first connected 10Base-T port is lit. A steady green LED indicates continuity.
2. After a successful connection, disconnect the active 10Base-T connector and connect it to the next successive port. Continue this process until all 10Base-T ports have been validated with good network connections.
3. Establish a connection from a device connected to Port 1 to a device connected to Port 2.
4. Once the connection between devices attached to Ports 1 and 2 has been successfully established, remove the RJ45 connector from Port 2 and connect it to each of the subsequent hub's 10Base-T ports, 3 through 8, to verify their functions.
5. If all ports test successfully, install the rest of the 10Base-T RJ45 connections and make sure that the LINK LED for each port lights. Remember, the 10Base-T device on the opposite end of the UTP cable must be operational.

Note

The LINK OK LED validates the receive pair only. The opposite end of the UTP segment is responsible for validating the transmit pair.

 **If the LINK OK LED does not light, there is no signal continuity.**

1. Check that the attached Data Terminal Equipment (DTE) is ON.
2. Check that the Link signal has not been disabled at the other network device.

If these checks do not identify the problem, it may indicate that the hub or device connected to the port is faulty.

Verifying Collision LED

The COLLISION LED will blink when an SQE or collision occurs. Occasional collisions are normal in Ethernet networks. A COLLISION LED that remains on may indicate that a specific port is experiencing excessive traffic problems.

Continuous blinking of the COLLISION LED may also indicate excessive frame collisions on a segment. This may be caused by an overloaded segment, a faulty cable or connection.

Chapter 3

Configurations

This chapter presents and illustrates the different types of configurations supported by this hub.

- Standalone
- Fiber uplink to the backbone
- Cascade

Standalone Configuration

Figure 7 shows a standalone hub supporting eight workstations.

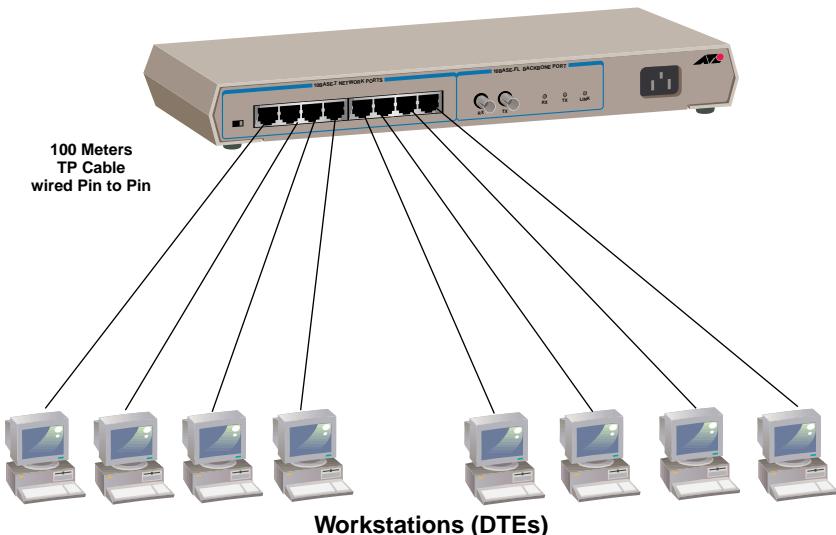


Figure 7: AT-MR840TF Standalone Configuration

Fiber Optic Backbone Network Configuration

The most straightforward configuration is a hub attached to a fiber optic (10Base-FL) backbone network. Figure 8 shows a backbone network configuration using the fiber uplink connector attached to a coaxial Ethernet cable via a fiber optic transceiver.

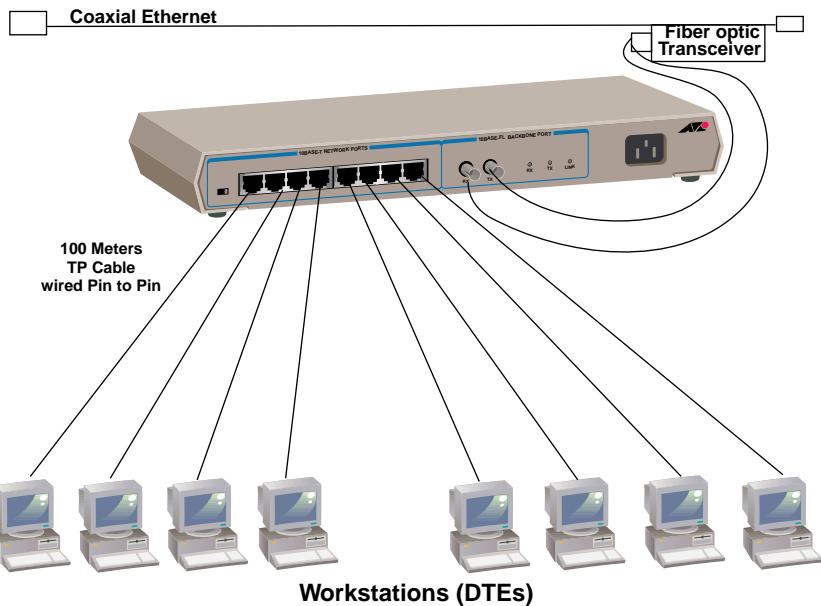


Figure 8: AT-MR840TF Fiber Backbone Configuration

Overall, in a backbone network configuration, each workgroup has its own local network and the backbone is used to link the various workgroups through one or several hubs. The advantages of a backbone network are twofold:

- ❑ As long as the backbone network is operating correctly, any problem within a sub-network does not affect other sub-networks.
- ❑ Since faults are isolated to a single sub-network, they are easier to locate.

The IEEE 10Base-FL standard extends a fiber segment length to 2 km. This applies only to configurations in which one 10Base-FL node connects to another 10Base-FL node.

Cascade Configuration

Port 8, used in conjunction with the MDI/MDI-X switch, is the specified port that allows you to connect one hub to another (cascade) or to connect to the backbone using the same medium type. To cascade hubs, you should connect Port 8 of the first hub to Ports 1-7 of the second hub and continue this scheme for any additional hubs. The MDI/MDI-X switch for Port 8 of the first hub must be set to the MDI position.

Figure 9 shows a cascaded topology using four hubs. Its design complies with the four-repeater rule discussed in the next paragraph.

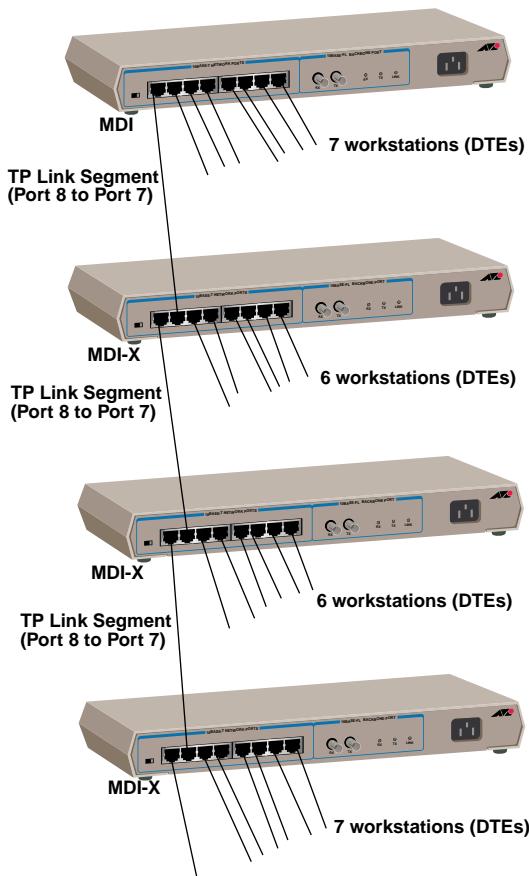


Figure 9: Port 8 Cascading Hubs

The Four-Repeater Rule

The IEEE 802.3 standard provides general rules for 10Base-T cable length and network connections on single segments of cable or on point-to-point links with media attenuation and signal propagation delays. The basic rule is that, for any network, the maximum number of repeaters in the data path between any two nodes cannot exceed four.

Appendix A

Technical Specifications

The AT-MR840TF Specifications

Physical

Height	37.6 mm (1.55 in.)
Width	332 mm (13 in.)
Depth	112 mm (4.4 in.)
Installation options	desk or wall mount

Electrical Rating

Input voltage	100-120 or 200-240 VAC
Frequency	50 or 60 Hz
Amperage	0.5/0.25 Amp

Environmental

Operating temperature	0° C to 50° C (32° to 94° F)
Storage temperature	-10° C to 70° C
Operating altitude	up to 10,000 ft.
Relative humidity	5% to 80%, non-condensing

Certification

Safety	CE Compliant UL 1950, CSA 22.2 No. 950, TUV EN60950, EN 60825
Emission EMI/RFI	FCC Class A, EN55022 Class A,
Immunity	EN50082-1, IEC 801-2 1984 level 2 EFT/Burst Immunity IEC 801-41 1988 level 2

Connector Pinouts for UTP and Uplink Port

Table 6 shows the pinouts for straight through cable when connecting a hub to a NIC. Table 7 shows the pinouts for straight through cable when connecting a hub to a hub (cascading using Port 8). According to the 10Base-T specification, pins 1 and 2 on the connector are used for transmitting data; pins 3 and 6 are used for receiving data. The “+” and “-” signs represent the polarity of the two wires that make up each wire pair.

Table 6: Hub to NIC Pin Assignments

Hub Side	Signal Name	Pin No.	Signal Direction	Signal Name
MDI/MDI-X switch must be set to MDI-X for UTP	RX+	1	<-----	TX+
	RX-	2	<-----	TX-
	TX+	3	----->	RX+
	TX-	6	----->	RX-

Table 7: Hub to Hub Pin Assignments

Hub Side	Signal Name	Pin No.	Signal Direction	Signal Name	Hub Side
MDI/MDI-X switch must be set to MDI for fiber	TX+	1	----->	RX+	MDI/MDI-X switch must be set to MDI-X
	TX-	2	----->	RX-	
	RX+	3	<-----	TX+	
	RX-	6	<-----	TX-	

Straight-through Cable Wiring

If the twisted-pair link segment is to join two ports on a switch, and only one of the ports has an internal crossover, the two pairs of wires must be straight-through, as shown in Table 8.

Table 8: Straight-through Cable RJ45 Pin Assignments

Hub	Device
1 (TX+)	1 (TX+)
2 (TX-)	2 (TX-)
3 (RX+)	3 (RX+)
6 (RX-)	6 (RX-)

Crossover Cable Wiring

Two AT-MR840TFs can communicate only if the transmitter on one unit is connected to the receiver on the other unit. This reversal, or crossover function, can be implemented either in the wiring or in the device itself (MDI-MDI-X) switch. When connecting AT-MR840TFs, a crossover must be implemented in the wiring. Refer to Table 9 for crossover pin assignments.

Table 9: Crossover Cable RJ45 Pin Assignments

AT-MR840TF	AT-MR840TF
1 (TX+)	3 (RX+)
2 (TX-)	6 (RX-)
3 (RX+)	1 (TX+)
6 (RX-)	2 (TX-)

10Base-T/10Base-FL Network Specifications

Table 10 provides an overview of the IEEE 802.3 specifications for 10Base-T/10Base-FL network configurations using twisted-pair wiring or fiber optics.

Table 10: IEEE 802.3 10Base-T/10Base-FL Network Specifications

10Base-T		10Base-FL
Media	Twisted Pair Cable	ST/SC fiber optic cable
Topology	Star, Tree	Star, Tree
External Devices	Network Adapter Card	Network Adapter Card
Maximum Segment Length	100 meters (328 ft.)	2K (1.25 miles)
Required Category	3, 4, or 5	850 NM
Maximum Devices per Segment	12	2 MAUs/segment
Required gauge and impedance	22 to 26 AWG TP wire with 100 W impedance	Multimode fiber 50/125 or 62.5/125 micron
Maximum Devices per Network	1024	1024

Appendix B

Technical Support Fax Order

Name _____

Company _____

Address _____

City _____ State/Province _____

Zip/Postal Code _____ Country _____

Phone _____ Fax _____

Incident Summary

Model number of Allied Telesyn product I am using _____

Network software products I am using _____

Brief summary of problem _____

Conditions (List the steps that led up to the problem.) _____

Detailed description (Use separate sheet, if necessary)

When completed, fax this sheet to the appropriate ATI office. Refer to Appendix D on page 27 for fax numbers.

Appendix C

AT-MR840TF Installation Guide Feedback

Please tell us what additional information you would like to see discussed in the guide. If there are topics you would like information on that were not covered in the guide, please photocopy this page, answer the questions and fax or mail this form back to Allied Telesyn International Corp. The mailing address and fax number are at the bottom of the page. Your comments are valuable when we plan future revisions of the guide.

I found the following the most valuable _____

I would like the following more developed _____

I would find the guide more useful if _____

Please fax or mail your feedback. Fax to 1-206-481-3790. Or mail to:
Allied Telesyn International Technical Communications Department
19015 North Creek Parkway
Bothell, WA 98011 USA

Appendix D

Where To Find Us

For Technical Support or Service

Location	Phone	Fax
Americas United States, Canada, Mexico, Central America, South America	1 (800) 428-4835	1 (206) 481-3790
Asia Singapore, Taiwan, Thailand, Malaysia, Indonesia, Korea, Philippines, China, India	(+65) 3815-613	(+65) 3833-830
Australia Australia, New Zealand	(612) 416-0619	(612) 416-9764
France France, Belgium, Luxembourg, The Netherlands, Middle East, Africa	(+33) 1-60-92-15-32	(+33) 1-69-28-37-49
Germany Germany, Switzerland, Austria, Eastern Europe	(+49) 30-435-900-126	(+49) 30-435-70-650
Hong Kong	(+852) 2-529-4111	(+852) 2 529-7661
Italy Italy, Spain, Portugal, Greece, Turkey, Israel	(+39) 2-416047	(+39) 2-419282
Japan	(+81) 3-3443-5640	(+81) 3-3443-2443
United Kingdom United Kingdom, Denmark, Norway, Sweden, Finland, Iceland	(+44) 1-235-442560	(+44) 1-235-442490
Technical Bulletin Board Service	1 (206) 483-7979	
Technical Support E-mail Address	TS1@alliedtelesyn.com	
CompuServe	Go ALLIED	
World Wide Web	http://www.alliedtelesyn.com	
FTP Server	Address: gateway.centre.com [lowercase letters] Login: anonymous [lowercase letters] Password: your e-mail address [requested by the server at login]	

For Information Regarding Allied Telesyn International Corp.

Allied Telesyn International Corp. 19015 North Creek Parkway Bothell, WA 98011 Tel: 1 (206) 487-8880 Fax: 1 (206) 489-9191	Allied Telesyn International Corp. 950 Kifer Road Sunnyvale, CA 94086 Tel: 1 (800) 424-4284 (USA and Canada) Fax: 1 (408) 736-0100
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For Sales Information

Australia**Lindfield, NSW**

Tel: (612) 416-0619, Fax: (612) 416-9764

Canada**Rexdale, Ontario**

Tel: (416) 675-6738, Fax: (416) 675-0057

Richmond, British Columbia

Tel: (604) 244-0678, Fax: (604) 270-3644

England**Abingdon, Oxon**

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France**Les Ulis**

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Germany**Berlin**

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Singapore

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United States**Scottsdale, AZ**

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Plaistow, NH

Tel: (603) 382-0815, Fax: (603) 382-0818

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Tel: (603) 431-6461, Fax: (603) 431-1649

Morrisville, NC

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Lake Oswego, OR

Tel: (503) 699-3130, Fax: (503) 636-6575

Austin, TX

Tel: (512) 261-6378, Fax: (512) 261-6379

Dallas, TX

Tel: (214) 365-9471, Fax: (214) 365-9472

San Antonio, TX

Tel: (210) 646-8744

Vienna, VA

Tel: (703) 506-0196, Fax: (703) 506-1986